2009 Research Days Abstract Form – Department of Ophthalmology – UNIFESP/EPM

2. SCIENTIFIC SECTION PREFERENCE (REQUIRED):

Review the Scientific Section Descriptions. Select and enter the two-letter Code for the one (1) Section best suited to review your abstract.

3. PRESENTATION PREFERENCE (REQUIRED) Check one:

- [x] Paper
- [ ] Poster
- [ ] FAST Paper

4. The signature of the First (Presenting) Author (REQUIRED) acting as the authorized agent for all authors, hereby certifies that any research reported was conducted in compliance with the Declaration of Helsinki and the 'UNIFESP Ethical Committee"

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Scientific Section Descriptions (two-letter code):

(BE) OCULAR BIOENGINEERING
(CO) CORNEA AND EXTERNAL DISEASE
(CA) CATARACT
(EF) ELECTROPHYSIOLOGY
(EP) EPIDEMIOLOGY
(EX) EXPERIMENTAL SURGERY
(GL) GLAUCOMA
(LA) LABORATORY
(LS) LACRIMAL SYSTEM
(LV) LOW VISION
(NO) NEURO-OPHTHALMOLOGY
(OR) ORBIT
(PL) OCULAR PLASTIC SURGERY
(PH) PHARMACOLOGY
(RE) RETINA AND VITREOUS
(RS) REFRACTIVE SURGERY
(RX) REFRACTION-CONTACT LENSES
(ST) STRABISMUS
(TR) TRAUMA
(TU) TUMORS AND PATHOLOGY
(UV) UVEITIS
(US) OCULAR ULTRASOUND

Deadline: Oct 12, 2009

FORMAT:
Abstract should contain:
Title
Author, Co-authors (maximum 6), Purpose, Methods, Results, Conclusion.

Poster guidelines:
ARVO Abstract Book (1.10 x 1.70m)

6. FIRST (PRESENTING) AUTHOR (REQUIRED):
Must be the author listed first in abstract body.

( ) R1 ( ) R2 ( ) R3 ( ) PIBIC
( ) PG0 (x) PG1 ( ) Fellow ( ) Technician

Last Name: QUINTO
First Name: GUILHERME
Middle: GOULART

Service (Sector): CO

CEP Number: **0737/08**

5. ABSTRACT (REQUIRED):

Title: Effects of Topical Human Amniotic Fluid and Human Serum in a Mouse Model of Keratoconjunctivitis Sicca

Author and Co-authors: Quinto GG, Behrens A, Campos MSQ.
Federal University of Sao Paulo – Ophthalmology Department

Purpose: To compare the effects of topical human amniotic fluid (HAF), topical human serum (HS), and topical artificial tears for the treatment of ocular surface disease in a dry eye model.

Methods: Thirty C57BL/6 mice were divided into 3 treatment groups: HAF, HS or preservative-free artificial tears. Under direct visualization with an operating microscope, mice received a transconjunctival injection of 0.05mL of botulinum toxin B (BTX-B) solution into the left lacrimal gland. Tear production and ocular surface fluorescein staining were evaluated in each mouse in 6 time points during a 4-week experiment period. **Results:** No differences among groups were found at baseline. Significant decrease in tear production was observed 3 days after BTX-B injection in all groups. At week 1, HAF and HS groups were able to improve tear production compared to control group ($P < 0.001$ and $P = 0.003$, respectively). The control group never reached its tear production baseline values in 4 weeks of therapy. The fluorescein staining started appearing noticeably at day 3. At week 2, HAF improved significantly the staining score compared to HS ($P = 0.043$) and control ($P = 0.007$) groups. HS group demonstrated statistically significant difference when compared to control group only at week 4 ($P = 0.047$).

Conclusion: HAF was superior to HS and artificial tears to improve corneal staining within 2 weeks of therapy in this induced mouse model of KCS. Further studies need to be performed to validate the efficacy of these promising medications and to ascertain whether the findings of this study can translate into a clinical benefit to patients with ocular surface epithelial disorders associated with dry eye.

Keywords: dry eye disease; animal model; amniotic fluid; human serum